Supply Lines with The Source

Newsletter of the NHDES Drinking Water & Groundwater Bureau
on the web at *www.des.nh.gov/dwgb*

Fall 2007

Source Water Protection Standardized

By Ryan Young, Source Water Protection intern

The American Water Works Association (AWWA) has released its first Source Water Protection Standard, outlining a strategy for utilities to help ensure a healthy and productive supply.

Under the standard, an accredited source water protection plan would include 1) a vision statement, 2) characterization and assessment of the source water and contributing land area, 3) goals addressing specific problems, 4) an action plan to mitigate existing and future threats to water quality, 5) implementation, and 6) evaluation and revision.

The keystone to a successful source water protection plan is section five, program implementation. The standard states that utilities shall develop or promote, where appropriate, voluntary and regulatory programs, such as wellhead protection planning, land conservation, land use controls, contingency planning, education and training, stormwater best management practices, riparian buffers, and low impact design and erosion and sediment control.

John Witherspoon, former chair of AWWA's Source Water Protection Committee, says that the standard was intentionally left without specifics to recognize and accommodate the diversity of source water systems and their natural waters. Within the framework of the standard utilities can adapt their plan according to unique local conditions and the interests of local stakeholders, and to reflect sustainable long-term commitments to the process by all parties. Witherspoon also stated that AWWA will release guidance documentation later this year to fill in some details regarding implementation of the standard.

One missing detail is how much time and money a utility would have to invest to attain accreditation under the standard. According to Witherspoon, a clear picture will not materialize until the first utilities move forward with the program. Moreover, investment will vary tremendously and depend on the supply, the size of the system, and how far any utility wants to raise itself above the platform set by the AWWA. However, the AWWA committee that created the standard believes that costs can be minimized by utilizing information that the utility has already compiled. Many utilities already have the pieces of the standard in place, even if they do not have a formal SWP program.

The biggest question left unanswered is why any utility would want to go to the expense to implement the standard since it is a non-governmental, voluntary program that promotes self regulation. However, the committee believes that many utilities will seek AWWA accreditation to recognize they are already implementing parts of the standard. Further, implementing the standard provides a sort of insurance plan against public health liabilities. Adopting the standard will also ensure that the product presented to the customer is high quality and sufficient to meet demands.

The Source Water Protection Standard (AWWA G300-07) is available through the AWWA bookstore at www.awwa.org/bookstore/product.cfm?id=47300 or by calling 1-800-926-7337.

INSIDE

Spotlight on ... Milford

Dedicating Resources to Better Manage Regulated Substances

In 1983 and again in 2001, Milford lost a major source of drinking water due to contamination. The contamination originated over a period of years from a few industrial sources, including a machine shop and a paint factory. The release of industrial contaminants caused the Savage and Kokko municipal wells to be inactivated and required that new sources be quickly located and put into service. The cost to build and operate a treatment facility to remove volatile organic compounds (VOCs) in contaminated groundwater associated with the Savage well site required over $15.5 million in public expenditures from 1983 through 2004.

The contamination from each industrial activity would have been preventable and the expense avoidable, had the managers of these industrial sources understood and followed best management practices (BMPs) designed to protect groundwater. Now Milford has a local management program that provides information and verifies compliance with BMPs for land uses that pose a potential threat to the current water supply.

This year, Milford's Water Commissioners voted to implement a local potential contamination source (PCS) management program within the Curtis wellhead protection area (WHPA) to ensure that regulated substances (e.g. oil, gas) are used, stored, or transferred in compliance with N.H. Administrative Rule Env-Wq 401, Best Management Practices for Groundwater Protection. Env-Wq 401 applies to regulated substances when found in greater than household quantities (typically greather than five gallons), with a few exceptions. A PCS management program involves conducting an inventory of all active PCSs (business names, addresses, regulated substances used on site, etc.), completing on-site BMP compliance surveys at those PCSs (i.e., inspections, typically repeated at least every three years), and tracking compliance as well as changes in PCS ownership/activities over time.

In Milford's case, the BMP compliance surveys were completed by HERTC Ltd., an environmental consultant/trainer, and focused on providing training and education to PCS managers in addition to determining BMP compliance. The surveys discovered a variety of compliance issues, including improper disposal of regulated substances, cracks in impervious surfaces used for bulk oil transfers, improper storage of waste products, no secondary containment for above-ground storage tanks, and unauthorized connections to the public storm drain system. Milford's health ordinance, adopted in 1999, provides the health officer the authority to enforce the BMPs required by Env-Wq 401, and codifies administrative and enforcement procedures. DES may also become involved in enforcement, as necessary. Today, Milford has an active PCS management program that will better protect its current water supply and minimize the release of regulated substances.

For additional information regarding BMP surveys, guidance, or training, please contact Pierce Rigrod at (603) 271-0688 or prigrod@des.state.nh.us or Diana Morgan at (603) 271-2947 or dmorgan@des.state.nh.us or visit www.des.nh.gov/dwspp/bmps.htm. To find out more about Milford's PCS management program, contact Larry Anderson at (603) 249-0661.

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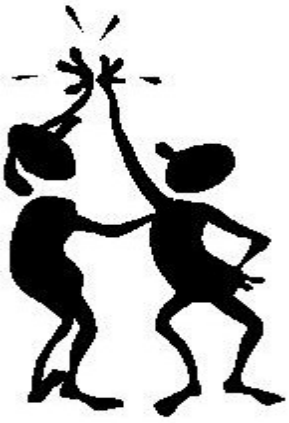
New Strategy for Source Water Protection

DES's Drinking Water Source Protection Program (DWSPP) is developing a new strategy to guide its efforts through 2012. The Source Water Protection Strategy will deal with preventing contamination of groundwater and public water supply sources and protecting the users of private wells. It will not address the management of groundwater withdrawals, which is being addressed by the Senate Bill 155 Groundwater Commission.

To kick off the process of developing the new strategy, DWSPP staff held two advisory committee meetings this summer, each attended by approximately 30 stakeholders. The meetings provided an overview and status report on current program activities, data on various aspects of source water protection and contamination in New Hampshire, and discussions of key issues and possible working groups. DWSPP staff will recruit internal and external stakeholders to participate in several working groups this fall. Their mission will be to study the issues and develop a draft strategy by next spring and finalize the strategy by the end of 2008. The final document will guide the activities of DWSPP staff and their efforts to coordinate source water protection activities with other agencies and programs, both within and outside DES.

DES first developed a Comprehensive State Groundwater Protection Program in 1994. With the adoption of a Groundwater and Drinking Water Strategy in 2000 this was expanded to include surface water sources of public water supply. The development of both strategies involved extensive stakeholder participation. With the completion of source water assessments reports (SWAR) in 2003, DES developed a more narrowly focused SWAR Follow-Up Strategy to parlay the new assessment information into more widespread adoption of local protection programs.



Extensive background information to support the strategy update process has been posted at www.des.nh.gov/dwspp/strategy.htm. For more information or to volunteer to participate in a working group, please contact Paul Susca at (603) 271-7061 or psusca@des.state.nh.us.

DES Partners With WaterSense

The New Hampshire Department of Environmental Services has signed on as a promotional partner to the U.S. Environmental Protection Agency's WaterSense program. WaterSense is a voluntary public-private partnership program sponsored by EPA to protect the future of the nation's water supply by promoting and enhancing the market for water-efficient products and services. EPA is working with independent laboratories to certify products that meet criteria for water efficiency and performance standards. Products carrying the WaterSense label are expected in home improvement stores later this year.

In addition to certifying and labeling products, WaterSense includes a campaign to generate awareness. EPA will rely heavily on partnerships with utilities, government, retailers, manufacturers, trade associations, and others to generate awareness and promote water efficiency.

Water utilities will play a particularly important role in the awareness campaign. As promotional partners, water utilities will receive materials to help supplement existing outreach efforts such as pamphlets and bill stuffers. Utilities should take advantage of the national brand and consistent message offered through the program and show their commitment to water efficiency by using the WaterSense partnership logo. Promoting water conservation in your community through awareness efforts, rebate programs, complimentary audits, and continuing education is a great way to manage demand and ensure the long term sustainability of existing water sources.

To become a WaterSense partner or view others who have, please visit www.epa.gov/watersense/partners/partners.htm. For more information about the program or questions about water conservation please contact Derek Bennett at (603) 271-6685 or at dbennett@des.state.nh.us.

Important Changes to the Comprehensive Shoreland Protection Act

This spring, the Legislature passed a series of important amendments, effective April 1, 2008, to the state's Comprehensive Shoreland Protection Act, RSA 483-B, that will improve the protection New Hampshire's surface waters. The amendments include the creation of a 50-feet vegetated buffer area (referred to as the "waterfront buffer") from the reference line of "public waters" (e.g., fourth order or higher rivers, great ponds), limits on impervious surface area, and inclusion of all designated rivers under the protection of the CSPA. The result will be better protection for the 27 public water supplies that currently rely on surface sources protected by the CSPA.

The following is a summary of the major changes to the Act:

- Within the 50-feet waterfront buffer, the Act prohibits pesticide and herbicide application and stump and rock removals, and restricts the removal of natural ground cover, i.e., herbaceous plants or woody shrubs less than three feet high.

- In the waterfront buffer, the minimum basal area of trees is determined by a grid and points system. Trees within each grid segment of 50 feet by 50 feet square will be assigned points based upon the diameter of the tree at four and a half feet from the ground. If the points within the segment exceed 50, trees in that segment of the waterfront buffer may be cut, as long as the sum of the points does not fall below 50 points.

- Within the protected shoreland, which is 250 feet from the reference line, excluding the waterfront buffer, impervious surfaces will be limited to between 20 and 30 percent of the area of the lot within the protected shoreland, depending on whether the vegetative conditions, or tree scores are met within the waterfront buffer and whether the property has a DES approved stormwater management plan. More impervious surface is allowed when there are protections in place to manage stormwater.

- With a few exceptions, a shoreland permit will be required for any construction, excavation or filling activities within the protected shoreland.

Other changes include a minimum shoreland frontage requirement of 150 feet of shoreline for each dwelling unit, and the inclusion of all designated rivers, including the Saco and Pemigewasset, as public waters protected by CSPA.

Up to six staff positions will be added over time to fully implement the Act. DES is beginning to draft rules to implement the amendments to the CSPA and it is anticipated that those rules will go into effect soon after April 1, 2008.

DES plans to implement a major outreach effort to educate the public, contractors, municipalities and other interested parties. For more information about the changes to the CSPA and upcoming workshops, please visit www.des.nh.gov/cspa.

NH Environmental Laboratory Accreditation Program

The New Hampshire Environmental Laboratory Accreditation Program (NHELAP) provides accreditation to environmental laboratories in New Hampshire, as well as out of state, to ensure sufficiently accurate, precise, and consistent results of tests, analyses, and measurements

For more information about NHELAP and for questions concerning environmental laboratories, please contact Bill Hall at (603) 271-2998 or whall@des.state.nh.us or visit www.des.nh.gov/nhelap.

"Pay it Forward" with Mutual Aid Agreements

Disasters and emergencies aren't limited to town boundaries and often affect surrounding communities. Therefore, mutual aid among water and wastewater utilities is extremely important as utilities try to recover from large disasters such as Hurricane Katrina or widespread flooding. The water sector is taking steps to encourage water utilities and local/state governments to establish intrastate mutual aid and assistance networks to make recovering from disasters quicker and more efficient process. Efforts have been underway to establish statewide Water and Wastewater Agency Response Network (WARN) systems that create a formalized system of utilities helping utilities during emergencies or disasters. California, Florida, Texas and Louisiana are just a few of the states that have already formed WARN systems. Many more states have started the process to create their own mutual aid networks.

There are many benefits to mutual aid. It provides a prompt and effective response, access to specialized, certified, and knowledgeable utility personnel, access to heavy equipment, and access to tools and supplies used by utilities. In case of a federally declared emergency, it facilitates FEMA reimbursement since reimbursement is contingent upon a pre-existing, signed mutual aid and assistance agreement. It improves emergency preparedness and coordination and expedites the arrival of aid (you don't have to work out the administrative items; the agreement and protocols work them out in advance for you). Most likely your system has already participated in mutual aid and assistance so this is just a way to formalize it.

Don't worry if you think your system is too small. Any assistance can be helpful to a system in need. Small systems may not have the equipment but they have certified and knowledgeable personnel. You may be concerned that your system is too large and will always be the one helping while no one can help you. Again it's not just about equipment but personnel too, including administrative and secretarial assistance, especially if a pandemic hits your system. When a major emergency hits hard, a large system will need all they help they can get even if it means coming from several different smaller systems.

New Hampshire already has its own mutual aid network, which was developed in 1998 and is the first statewide mutual aid program for public works in the U.S. The N.H. Public Works Mutual Aid Program (NHPWMAP) is managed by the UNH Technology Transfer Center and currently has 98 member communities. The program was used most recently during the April 2007 floods, the August 2006 storm in North Hampton and the October 2005 floods. Under the NHPWMAP, towns that send employees and equipment to other communities are covered by set rates. Their own insurance covers injury or damaged equipment. There is a small annual membership fee of $25. It does not require any disaster declaration to activate, which means utilities can request aid at almost any time, even for small scale events. There is no obligation to respond since the needs of your own community come first.

Eligible water systems are urged to participate in this program. DES has hired a circuit rider, Dave Danielson from SEA Consultants Inc., who will meet with each municipal water system in the state to explain the NHPWMAP and to assist systems with signing up. To see if your town is already a member, please check out the list of participating communities and other information on the program at www.t2.unh.edu/ma.

Currently, this program is only available to municipalities and governmental subunits, such as village districts. DES has created a steering committee to work on expanding eligibility to other entities.

A fact sheet on frequently asked questions for water and wastewater mutual aid in New Hampshire is available at www.des.nh.gov/factsheets/ws/ws-18-1.htm. If you have any questions regarding New Hampshire's mutual aid please contact Johnna McKenna at (603) 271-7017 or jmckenna@des.state.nh.us.

Security Website Changes

Take a minute to check out the newly updated and organized Water System Emergency Planning/Security website at www.des.nh.gov/dwgb/EmergencyPlanning/default.asp. The website includes information relating to emergency planning, mutual aid, pandemic planning, emergency numbers and security type information.

For more information about water system emergency plans and security, please contact Johnna McKenna at (603) 271-7017 or jmckenna@des.state.nh.us.

New Hampshire Certified Operator Fined for Falsifying Water Test Result

A veteran New Hampshire certified operator was recently fined for submitting a falsified water test result to the Drinking Water and Groundwater Bureau (DWGB). On April 10, 2007, the Strafford County Superior Court approved a settlement between the State of New Hampshire and the operator. Under the terms of the settlement, the operator agreed to a $10,000 civil penalty with $2,500 due immediately and the remaining $7,500 suspended provided the operator does not violate state law within the next two years.

The case began when DWGB staff noticed that the laboratory sample number on a submitted test result form matched the sample number for a previously submitted test result. When contacted by DWGB staff, laboratory officials confirmed that the most recently submitted test result was fraudulent. Investigation determined that the previous test result had been altered and resubmitted in place of a new one. The case was then referred by DES to the N.H. Attorney General's Office for civil judicial action.

When the court's approval of the settlement was announced, DES Commissioner Thomas Burack stated, "When a violation involves drinking water and public health, DES is committed to prosecuting this type of illegal activity. Water system operators are certified by DES to perform an important public health function that is not to be taken lightly."

For more information on enforcement issues, please contact Alan Leach at (603) 271-2854 or aleach@des.state.nh.us, or Emily Jones at (603) 271-0659 or ejones@des.state.nh.us. Enforcement documents issued by DES programs can be viewed on-line at www.des.nh.gov/legal/documents.

Groundwater Discharge Permits Rule Readopted

Recently, the Drinking Water and Groundwater Bureau (DWGB) readopted the Groundwater Discharge Permits and Registrations rule Env-Wq 402 (previously Env-Ws 1500). This rule establishes standards, criteria, and procedures for groundwater discharge permits and registrations to prevent pollution and protect groundwater. The focus is to eliminate instances where groundwater has been contaminated by the improper disposal of waste and wastewater containing solvents, petroleum products and other industrial and commercial wastes. All discharges of non-domestic wastewater to the ground must be registered with, and in some cases permitted by, the department. In all cases the rules prohibit any discharge of non-domestic wastewater containing regulated contaminants above ambient groundwater quality standards (AGQS). Permits for discharges of large quantities of domestic wastewater and discharges of non-domestic wastewater to lagoons or via land application also are issued under this program.

For questions on the rule, please contact Mitch Locker at (603) 271-2858 or mlocker@des.state.nh.us. The adopted rules are now published and are available at www.des.nh.gov/rules/desadmin_list.htm or by calling DES Public Information Center at (603) 271-2975. If you would like to receive DWGB rulemaking notices on proposed rules, please contact Debra Sonderegger at (603) 271-2862 or dsonderegger@des.state.nh.us.

Drinking Water Advisories on the Web

In order to help communicate drinking water issues to the public, the Drinking Water and Groundwater Bureau (DWGB) has recently created a website for acute health advisories concerning drinking water at www.des.nh.gov/dwgb/advisories/advisories.asp. The advisories include boil water orders for E. coli detections and for nitrate/nitrite exceedances.

The website includes basic information about the affected system and provides links to various DWGB fact sheets. It is updated on a regular basis and advisories are posted as soon as they are issued. An advisory is initially listed under the "Active Drinking Water Advisories," however, once the system has resolved the problem, the advisory is moved to the "Drinking Water Advisories Lifted" section and will remain there for up to 30 days.

For more information or questions about the boil water order advisories, please contact Linda Magoon at (603) 271-0655 or lmagoon@des.state.nh.us. For the nitrate/nitrite advisories, please contact Leah McKenna at (603) 271-0655 or lmckenna@des.state.nh.us.

Updates of Analysis Request Forms

When any sample is collected for compliance purposes, it must be done in accordance with the master sampling schedule (MSS). The first step is always to label the sample and fill out a chain of custody form, which is a formal and legal process. This form must accompany the sample from collection point to the laboratory. Having the sample in the custody of a responsible party ensures that the sample is not tampered with and that the result would stand up to legal scrutiny if challenged.

The chain of custody form has been referred to by the Drinking Water and Groundwater Bureau as the "analysis request form" for many years. This form contains the correct compliance sampling site(s) and description(s). A pre-printed form may be obtained directly from the DES OneStop site along with the MSS, at www2.des.state.nh.us/OneStop/Public_Water_Systems_Query.aspx

New analysis request forms have been created and will be available through the OneStop website by mid October. As soon as the new forms are available they will be attached to the electronic version of the MSS. With these new forms, it is imperative that the correct sample site number and description are included on the form when samples are submitted to the laboratory. Results with incorrect sampling numbers/locations will be rejected and returned to you or your laboratory. Please notify DWGB of site changes prior to submission of results to avoid sample rejections.

A key change in the new forms is the dropping of the terms "compliance" and "non-compliance" samples and a shift in focus to the sample collection site and what that water represents. Samples collected from your compliance sampling site belong on a specific form. The only choices on this form are "routine," "confirmation," and "make-up." Results from these samples will be used to determine your water system's compliance status. Note that the first result received per quarter will be used for compliance calculations for that quarter. Additional samples collected beyond those required by your MSS would be factored in for compliance calculations in the following quarter.

Any additional samples that you collect that are not specifically for compliance purposes should be submitted with the newly created analysis request form entitled "General System Evaluation Samples." There are two categories on this form for you to select: "treatment evaluation" and "other." "Treatment evaluation" sample examples include pre- and mid-treatment samples, lead/copper sampling after treatment installation to ensure no adverse impact from the change, bacteria samples after a line break, etc. The "other" category is used as a catch-all for any additional samples that don't fit into a treatment evaluation category or for samples from systems with no treatment. Examples include samples taken to determine if a well is under the influence of groundwater and new well samples prior to use/connection. Disinfection byproduct and initial distribution system evaluation samples (specific for disinfection byproduct rule requirements) are also included in the "other" category.

If any results from the general system evaluation samples indicate an exceedence of an acute contaminant, specifically nitrate, E. coli or fecal coliform, DWGB will contact you to help evaluate the results and assess whether or not the consumers are drinking the water. DWGB will take further action if it determines that there is an immediate health risk.

For questions about the analysis request form, please contact Selina Makofsky at (603) 271-4109 or smakofsky@des.state.nh.us.

2007 New England Private Well Symposium

The 2007 New England Private Well symposium will be held on December 3 and 4 at the Hyatt Regency in Newport, R.I. The purpose of the symposium is to integrate research and educational efforts in the field of private well protection and testing to reduce the risks associated with groundwater use to private well water users.

The symposium will include presentations and posters on land use and groundwater, public health, well water treatment, legal and regulatory issues, education, risk, communication, and naturally occurring contaminants.

For more information about the symposium, please contact Alyson McCann at the URI Cooperative Extension at (401) 874-5398 or alyson@uri.edu or visit www.usawaterquality.org/newengland/wellsymposium/default.html for the agenda and registration information.

2007 New Hampshire Drinking Water Exposition & Trade Show

The N.H. Water Works Association (NHWWA) will host the annual N.H. Drinking Water Exposition and Trade Show on Wednesday, October 31 from 8 a.m. to 4 p.m. at the Center of New Hampshire, 700 Elm Street, Manchester. There will be over 100 exhibitors and 25 seminars. There is no admission fee to visit the displays or the exhibition hall, however, there is a $20 fee to attend the seminars.

Seminar topics include mutual aid, GIS, treatment and distribution issues, sampling issues, excavation safety, leak detection, metering, and much more.

Contact hours will be awarded for attending the seminars. Registration forms and payment information will be sent to all public water systems and New Hampshire certified operators, as well as members of the NHWWA during the month of September. Registration prior to the day of the event is encouraged.

If you have any questions about the expo, please contact the NHWWA at (603) 415-3959 or NHWWA@worldpath.net.

Goodbyes and Welcomed New Faces

The Drinking Water and Groundwater Bureau said farewell to Becky Presby, Yvette Meunier, Dean Robinson, and Ann Marie Smith this summer. However, we are happy to welcome Joan Fitzsimmons and Suzanne Picone to the group.

Joan Fitzsimmons is working in the Monitoring and Enforcement section and is responsible for the Lead and Copper monitoring program. Joan can be reached at (603) 271-2516 or jfitzsimmons@des.state.nh.us. Joan comes to DES from the N.H. Department of Safety.

Suzanne Picone is assisting with the Chemical Monitoring Waiver Program, the Groundwater Discharge Permitting and Regulation Program, and the Water Well Board. Suzanne can be reached at (603) 271-0657 or Suzanne.M.Picone@des.state.nh.us. Suzanne holds a degree in environmental science and has experience in providing excellent customer service as a bank teller manager.

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